IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of recording marks on an information layer of a record carrier, the method comprising acts of:

irradiating an information layer with a pulsed radiation beam to record marks on said information layer, said information layer having a phase that is reversibly changeable between a crystal phase and an amorphous phase; and

wherein writing an even mark having a time length of nT is written by a sequence of n/2 pulses, where n denotes an even integer value equal to selected from 4, 6, 8, or 10 and T denotes a length of one period of a reference clock, and wherein an odd mark having a time length of nT is written by a sequence of (n-1)/2 pulses, where n denotes an odd integer value equal to selected from 5, 7, 9 or 11,

wherein a last pulse in the sequence of pulses for writing an the odd mark has a period that is a first period difference $\Delta 1p$ longer than a last pulse in the sequence of pulses for writing an the even mark, wherein a gap preceding the last pulse in the sequence of pulses for writing an the odd mark has a period first gap difference $\Delta 1g$ longer than a gap preceding the last pulse in the sequence of pulses for writing an even mark, wherein the

~~periods~~ first gap and first period differences Δ1g and Δ1p have an unequal duration not equal to T, ~~wherein~~ a cooling gap succeeding the last pulse in the sequence of pulses for writing an odd mark has a period that is a second difference Δ2 longer than a cooling gap succeeding the last pulse in the sequence of pulses for writing an even mark, and ~~wherein~~ a sum of the ~~periods~~ first gap, first period, and second differences Δ1p, Δ1g, and Δ2 is within a range from 0.7T to 1.1T.

2. (Currently amended) The method according to claim 1, wherein the sum of the ~~periods~~ first gap and first period differences Δ1p and Δ1g is within a range from 0.25T to 0.75T.

3. (Canceled)

4. (Currently amended) The method according to claim 1, wherein a mark having a time length of 3T is written by a single pulse having a ~~period~~ third difference Δ3 longer than the last pulse in the sequence of pulses for writing an even mark, and wherein a subsequent cooling gap has a ~~period~~ fourth difference Δ4 longer than the cooling gap succeeding the last pulse in the sequence of pulses for writing an even mark, and wherein a sum of the ~~periods~~ third and fourth differences Δ3 and Δ4 is within a range from 0.7T to 1.1T.

5. (Currently amended) The method according to claim 4, wherein a duration of the last pulse in the sequence of pulses for writing an even mark (Tp) is substantially equal to 7.2 ns;

wherein the duration of the cooling gap succeeding the last pulse in the sequence of pulses for writing an even mark (Tc) is substantially equal to 5/8T; the ~~period~~ second difference $\Delta 2$ has a duration substantially equal to 3/8T;

wherein the ~~period~~ third difference $\Delta 3$ has a duration substantially equal to 7/8T – 7.2 ns; and

wherein the ~~period~~ fourth difference $\Delta 4$ has a duration substantially equal to 5/8T.

6. (Previously presented) The method according to claim 5, wherein a start of the single pulse for writing a mark having a time length of 3T relative to the start of a period of the reference clock corresponds to the start of the first pulse in the sequence of pulses for writing an even mark relative to the start of a period of the reference clock.

7. (Currently amended) A recording device for recording marks on an information layer of a record carrier, the device comprising:

a radiation source configured to generate a radiation beam to irradiate an information layer using a pulsed radiation beam to record marks on said information layer, wherein each mark is written by a sequence of one or more pulses, and wherein said

information layer has a phase that is reversibly changeable between a crystal phase and an amorphous phase, and

a control unit configured to control power of the radiation beam and to provide the sequences of pulses for recording the marks such that an even mark having a time length of nT is recorded by a sequence of n/2 pulses, where n denotes an even integer value ~~equal to~~ selected from 4, 6, 8, or 10, and where T denotes a length of one period of a reference clock, and such that an odd mark having a time length of nT is written by sequence of (n-1)/2 pulses, where n denotes an odd integer value ~~equal to~~ selected from 5, 7, 9 or 11,

wherein a last pulse in the sequence of pulses for writing ~~an~~ the odd mark has a period that is a first period difference $\Delta 1p$ longer than a last pulse in the sequence of pulses for writing an even mark, ~~wherein~~ a gap preceding the last pulse in the sequence of pulses for writing ~~an~~ the odd mark has a ~~period~~ first gap difference $\Delta 1g$ longer than a gap preceding the last pulse in the sequence of pulses for writing an even mark, ~~wherein~~ the ~~periods~~ first gap and first period differences $\Delta 1g$ and $\Delta 1p$ have an unequal duration not equal to T, ~~wherein~~ a cooling gap succeeding the last pulse in the sequence of pulses for writing an odd mark has a period that is a second difference $\Delta 2$ longer than a cooling gap succeeding the last pulse in the sequence of pulses for writing an even mark, and ~~wherein~~ the sum of the ~~periods~~ first gap, first period, and second differences periods $\Delta 1p$, $\Delta 1g$, and $\Delta 2$ is within a range from 0.7T to 1.1T.

8. (Currently amended) A recording device for recording marks on an information layer of a record carrier, the device comprising:

a radiation source configured to generate a radiation beam to irradiate an information layer using a pulsed radiation beam to record marks on said information layer, wherein each mark is written by a sequence of one or more pulses, and wherein said information layer has a phase that is reversibly changeable between a crystal phase and an amorphous phase,

a control unit configured to control power of the radiation beam and to provide sequences of pulses for recording the marks, wherein the pattern of pulses and gaps between the pulses in a sequence of pulses is based on a set of write parameters ~~(Δ1p, Δ1g, Δ2, Δ3, Δ4)~~selected from first gap, first period, second, third, fourth and differences Δ1p, Δ1g, Δ2, Δ3, Δ4 provided to the control unit,

an identification unit configured to identify the record carrier, and

a selection unit ~~(~~configured to select a set of write parameters from a collection of sets of write parameters based on an identification of the record carrier and to provide the control unit with the selected set of write parameters,

wherein the selection unit is further configured to provide the control unit with a default set of write parameters when the identification unit is incapable of identifying the record carrier or the selection unit is incapable of selecting a set of write parameters from

the collection of sets of write parameters based on the identification of the record carrier or if the identification unit and the selection unit is incapable of said identifying and selecting, respectively, ~~wherein~~ said default set of write parameters are such that an even mark having a time length of nT is recorded by a sequence of n/2 pulses, where n denotes an even integer value ~~equal to~~ selected from 4, 6, 8, or 10 and T denotes a length of one period of a reference clock, and an odd mark having a time length of nT is written by as sequence of (n-1)/2 pulses, where n is representing an odd integer value ~~equal to~~ selected from 5, 7, 9 or 11,

wherein a last pulse in the sequence of pulses for writing ~~an~~ the odd mark has a period that is a first period difference $\Delta 1p$ longer than a last pulse in the sequence of pulses for writing an even mark, ~~wherein~~ a gap preceding the last pulse in the sequence of pulses for writing ~~an~~ the odd mark has a ~~period~~ first gap difference $\Delta 1g$ longer than a gap preceding the last pulse in the sequence of pulses for writing an even mark, ~~wherein~~ the ~~periods~~ first gap and first period differences $\Delta 1g$ and $\Delta 1p$ have an unequal duration not equal to T, ~~wherein~~ a cooling gap succeeding the last pulse in the sequence of pulses for writing an odd mark has a period that is a second difference $\Delta 2$ longer than a cooling gap succeeding the last pulse in the sequence of pulses for writing an even mark, and ~~wherein~~ a sum of the ~~periods~~ first gap, first period, and second differences $\Delta 1p$, $\Delta 1g$, and $\Delta 2$ is within a range from 0.7T to 1.1T.

9. (Currently amended) The recording device according to claim 7, wherein the sum of the ~~periods~~ first gap and first period differences $\Delta 1p$ and $\Delta 1g$ is within a range from 0.25T to 0.75T.

10. (Currently amended) The recording device according to claim 7, wherein the control unit is further configured to generate a sequence of pulses for recording a mark having a time length of 3T, said sequence of pulses for recording a mark having a time length of 3T comprising a single pulse having a ~~period~~ third difference $\Delta 3$ longer than the last pulse in the sequence of pulses for writing an even mark, and a subsequent cooling gap being a ~~period~~ fourth difference $\Delta 4$ longer than the cooling gap succeeding the last pulse in the sequence of pulses for writing an even mark, the sum of the ~~periods~~ third and fourth differences $\Delta 3$ and $\Delta 4$ being within a range from 0.7T to 1.1T.